

## REMARKS

In response to the above-identified Final Office Action, Applicant seeks reconsideration of the application. In this response, no claims have been canceled, Claims 31-35 have been added, and Claims 23, 25 and 27 have been amended. Accordingly, Claims 23-35 are pending.

### I. Claims Rejected Under 35 U.S.C. § 103(a)

Claims 23-25 and 27-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,609,825 issued to Berger et al. (Berger) in view of U.S. Patent Application Publication No. 2003/0193597 to Fossum et al. (Fossum) in further view of U.S. Patent No. 4,709,259 issued to Suzuki (Suzuki). Applicant respectfully traverses this rejection.

Claim 23, as amended, recites that integration time for first color and second color can be set independently by using the control logic to control timing of the first reset bit fed to each of the first and second reset shift registers. That is, since the first reset bit marks the start of integration, the beginning of the integration for the pixel elements of each color channels can differ by controlling the timing of the first reset bit fed to each of the first and second reset shift registers. In contrast, Suzuki teaches that when providing different integration times for different colors, all of the colors are reset at the same time  $t_0$  as shown in Figure 3 so as to begin the integration period for each color at the same time. As such, Suzuki teaches away from what is claimed by Applicant. That is, setting integration time for first color and second color independently by using a control logic to control timing of the first reset bit that marks the start of integration cannot be taught by starting integration for all colors at the same time as stated in Suzuki. In this regard, Applicant respectfully submits that Berger and Fossum also does not teach controlling timing of first reset bit fed to first and second reset shift registers to set integration time for first color and second color independently. For at least the reasons discussed above, Claim 23 is allowable over Berger in view of Fossum in further view of Suzuki.

As to independent Claim 27, this claim has been amended to recite the start of the integration for the pixel elements of each color channels can differ by controlling the timing of the first reset bit fed to each of the first and second reset shift registers. In contrast, Suzuki teaches that when providing different integration times for different colors, all of the colors are reset at the same time  $t_0$  as shown in Figure 3 so as to begin the integration period for each color at the same time. As such, Suzuki teaches away from what is claimed by Applicant. That is,

starting integration for the sensor elements of each color at different time by controlling timing of the first reset bit fed to each of the first and second reset shift registers cannot be taught by starting integration for all colors at the same time as stated in Suzuki. In this regard, Applicant respectfully submits that Berger and Fossum also does not teach starting integration for the sensor elements of each color at different time by controlling timing of the first reset bit fed to each of the first and second reset shift registers. For at least the reasons discussed above, Claim 27 is allowable over Berger in view of Fossum in further view of Suzuki.

Accordingly, Applicant respectfully requests withdrawal of the rejection of independent Claims 23 and 27. Claims 24, 25, 28 and 29 are each respectively dependent on independent Claims 23 and 27. Therefore, the rejected dependent claims are allowable at least for the same reasons as their respective independent claims.

Claims 26 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Berger in view of Fossum in further view of Suzuki in further view of U.S. Patent No. 5,541,645 issued to Davis (Davis). Applicant respectfully traverses this rejection.

As Claims 26 and 30 are each respectively dependent on independent Claims 23 and 27, the discussion above with regard to the independent Claims and Berger, Fossum and Suzuki applies here. Because Berger, Fossum and Suzuki do not contain limitations recited in Applicant's independent claims as set forth above, and because David does not cure these deficiencies, the combination of Berger, Fossum and Suzuki and David does not teach or suggest Applicant's dependent claims. Therefore, Claims 26 and 30 are patentable over Berger in view of Fossum in further view of Suzuki in further view of Davis.

## II. New Claims

Applicant respectfully submits that the New Claims 31-35 are supported by the original disclosure. As to New Claim 31, Applicant submits that none of the cited references teaches controlling the reset shift registers and the readout shift registers such that charge accumulation levels of the sensors elements of each of the three colors can be set independently, wherein the color sensor array has less than or equal to two reset metal lines for each row of the sensor elements to receive reset signals from the reset shift registers. This claimed feature provides advantages not suggested by Berger, Fossum or Suzuki. In accordance with one aspect, one

embodiment of the invention provides the ability to set charge accumulation levels independently for the pixel elements of each of the three color channels without significantly impacting the size of each pixel element. This is accomplished by using less than or equal to two reset lines in order to create the independence of integration times among the three colors. Thus, only one additional metal line is added for each row of the color sensor array, minimizing impact on the size of each pixel elements. Accordingly, New Claim 31 defines a one embodiment of the invention that is patentable over Berger, Fossum and Suzuki. New Claims 32-35 all depend from Claim 31 and are allowable for at least the same reasons.


#### CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance, and such action is earnestly solicited at the earliest possible date. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

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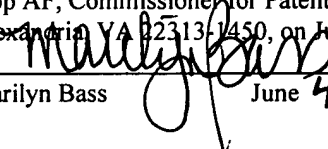
Dated: June 4, 2004

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#### CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 4, 2004

  
Marilyn Bass

June 4, 2004